Avision

Color Image Scanner

User's Manual

Regulatory model: DF-0510

Avision Inc.

Trademarks

Microsoft is a U.S. registered trademark of Microsoft Corporation.
Windows and MS-DOS are trademarks of Microsoft Corporation.
IBM, IBM PC are registered trademarks of International Business Machines Corp.
ENERGY STAR® is a U.S. registered mark.
Other brands and product names herein are trademarks or registered trademarks of their respective holders.

Copyright

All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without the prior written permission of Avision Inc.

Material scanned by this product may be protected by governmental laws and other regulations, such as copyright laws, the customer is solely responsible for complying with all such laws and regulations.

Warranty

The information contained in this document is subject to change without notice.

Avision makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of fitness for a particular purpose.

Avision shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

FCC Radio Frequency Interference Statement

This product has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The FCC Class B limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your point of purchase or service representative for additional suggestions.

CE Warning

This product satisfies the Class B limits of EN55022, EN55024 and safety requirements of EN 60950.

Disposal of Waste Equipment

This symbol on the product or on its packaging indicates that the product can not be disposed of with your other household waste. Instead it should be sent to appropriate facilities for recovery and recycling in an effort to protect human health and the environment. Fore more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

As an ENERGY STAR® Partner, Avision Inc. has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

System Requirements

- IBM compatible PC 586, Pentium or higher
- Microsoft Windows 98SE/Me/2000/XP/Vista
- USB port 2.0 (compatible with USB 1.1)
- At least 100 MB of free hard disk space
- At least 128 MB of system memory
- A CD-ROM drive

Table of Contents

1. Introduction 1-1

2. Scanner Installation 2-1

   2.1 Removing the shipping lock 2-2
   2.2 Connecting the ADF Cable 2-2
   2.3 Loading the Paper with ADF 2-3
   2.4 Fixing Paper on the glass board 2-4
   2.5 Installing the Scanner Driver and Cables 2-5

3. Completing Your First Scan 3-1

   3.1 Verifying Your Scanner Installation 3-1

4. Using the Scanner Properties Dialog Box 4-1

   4.1 Buttons on the Scanner Properties Dialog Box .. 4-2
   4.2 The Image Tab 4-4
   4.3 The Compression Tab 4-19
   4.4 The Color Dropout Tab 4-21
   4.5 The Paper Tab 4-24
   4.6 The Preview Tab 4-37
   4.7 The Options Tab 4-38
   4.8 The Setting Tab 4-43
   4.9 The Information Tab 4-46

5. ISIS Interface Operation 5-1

6. Using The Button 6-1

6.1 Installing Button Manager 6-2
6.2 Checking the Button Configurations Before ..... Scanning 6-2
6.3 Scanning From One Touch of the Buttons 6-4

7. Care and Maintenance 7-1

7.1 Cleaning the ADF 7-1
7.2 Cleaning the Glass..... 7-3
7.3 Replacing the ADF detachable pad module 7-4

8. Troubleshooting..... 8-1

8.1 Frequently asked Questions 8-1
8.2 Technical Service 8-3

9. Specifications..... 9-1

1. Introduction

Congratulations on your purchase of the color image scanner. With this scanner, you can quickly scan documents to increase productivity.

Before you install and operate the new scanner, please take a few minutes to read through this manual. It provides proper instructions for you to unpack, install, operate and maintain the scanner.

The following figure indicates the package contents. Please check all the items against your checklist. If you do not receive all the items, please contact your authorized local dealer immediately.

Scanner

Quick Guide /CD

Paper Guide

Paper Guide Extension

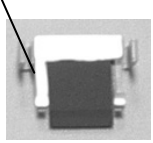
USB Cable

Power Supply

Power Cable

Paper Stop

ADF Pad



Note:

1. *Only use the AC adapter (HEG42-240200-7L made by HiTron) included in the machine. Using other AC adapters may damage the machine and void the warranty.*
2. *Please unpack the packing carefully, and check the contents against the checklist. If any items are missing or damaged, please contact your dealer immediately.*

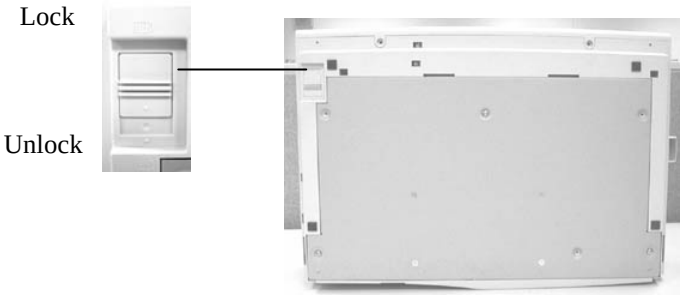
2. Scanner Installation

Precautions

- Keep the scanner out of direct sunlight. Direct exposure to the sun or excessive heat may cause damage to the unit.
- Do not install the scanner in a humid or dusty place.
- Be sure to use the proper AC power source.
- Place the scanner securely on an even, flat surface. Tilted or uneven surfaces may cause mechanical or paper-feeding problems.
- Retain the scanner box and packing materials for shipping purposes.

2.1 Removing the shipping lock

Unlock the scanner by movng the lock switch to the “Unlock” position.

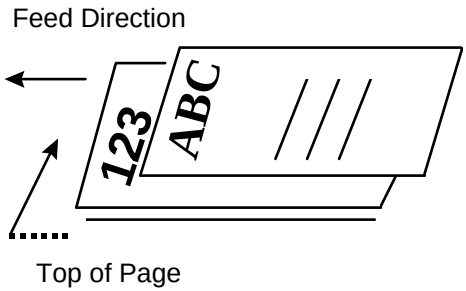


2.2 Connecting the ADF Cable

Connect the ADF cable as below.

2.3 Loading the Paper with ADF

Place your document with the text face up and make the top of the page to the left side as shown below.



2.4 Fixing Paper on the glass board

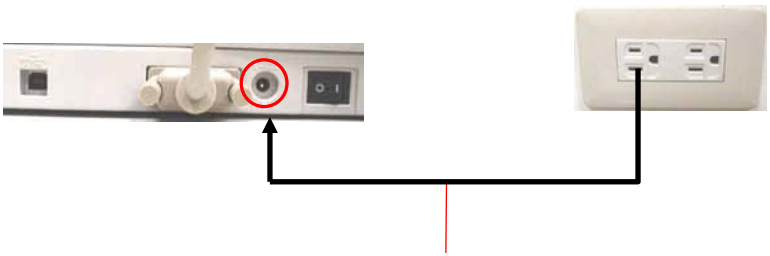
Align the document to the reference mark, as indicated

2.5 Installing the Scanner Driver and Cables

Note:
1. The Windows system CD may be required when installing on some PC's.
2. To ensure your computer can identify the USB scanner, please install scanner driver first before connecting the scanner to your computer.

2.5.1 Connecting to Power

Plug the small end of the power adaptor into the power jack of your scanner. Insert the other end to an appropriate power outlet.



Press the power switch to the "I" position to turn on the scanner. To turn off the scanner, please press the power switch to the "O" position.

2.5.2 Installing the Scanner Driver

1. Place the supplied CD-ROM onto your CD-ROM drive.
2. The software installation graphic appears. If not, run **"setup.exe"**.

CD Setup
Avision
A vision of your office
www.avision.com
To ensure the buttons work properly on the scanner, please FIRST install Button Manager before installing the scanner driver.
Install Button Manager
Install Scanner Driver
Install Adobe Reader
View Manuals
Exit

Contents on the installation graphic:

- **Install Button Manager**: To use the buttons on the scanner, you need to install Button Manager. To ensure Button Manager works properly, please FIRST install Button Manager before installing the scanner driver.

- **Install Scanner Driver:** To communicate with your scanner, you need to install the scanner driver. After installing the Button Manager software, click **Install Scanner Driver** to install the scanner driver on your computer.

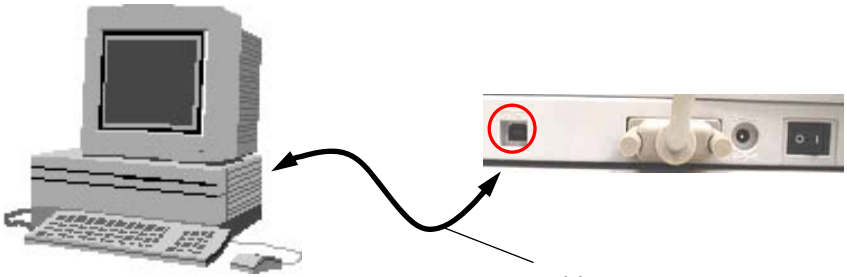
- **Install Adobe Reader:** To view the user's manuals for the scanner and Button Manager, you need to use Adobe Reader to open and view the manuals in pdf file format. If you already have Adobe Reader installed on your computer, you may disregard this item.

- **View Manual:** Click **"View Manual"** to view or print the detailed user manual for the scanner and Button Manager respectively.

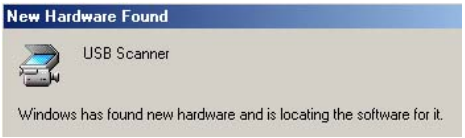
3. Click **Install Button Manager** to install the Button Manager software and then click **Install Scanner Driver** to install the scanner driver on your computer.

2.5.3 Connecting to Computer

1. Connect the **square end** of the USB cable to the USB port of your scanner. Connect the **rectangle end** to the USB port of your computer.



2. The computer should detect a new USB device and prompt a **"New Hardware Found"** message.



(Windows 9X/Windows ME)

3. In Windows 98SE, Windows ME, or Windows 2000, confirms that the "**Search for a better driver.**" is selected and click the **"Next"** button.

Add New Hardware Wizard
Windows has found the following new hardware:
USB Scanner
Windows can automatically search for and install software that supports your hardware. If your hardware came with installation media, insert it now and click Next.
What would you like to do?
Automatic search for a better driver (Recommended)
Specify the location of the driver (Advanced)
< Back
Next >
Cancel

In Windows XP, click the **Next** button to continue. When the XP certification screen appears, click **Continue Anyway** to complete the installation.

In Windows Vista, click the **Recommended** option, and then click **Continue** button to complete the installation.

4. When the **Finish** dialog is prompted, click the **Finish** button.
5. Click **"View Manual"** to view or print the detailed user manual for the scanner and bundled applications respectively.

Note:
To uninstall the scanner driver in Windows XP or Windows 2000, be sure to keep your scanner connecting to your computer.

3. Completing Your First Scan

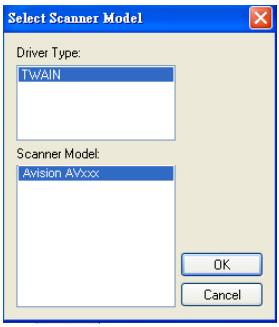
3.1 Verifying Your Scanner Installation

To verify if your scanner installation is correct, Avision provides you a useful test program called Avision Capture Tool. With this tool, you can perform simple scans and view the captured images. In addition, it helps you complete your scan at a rated speed.

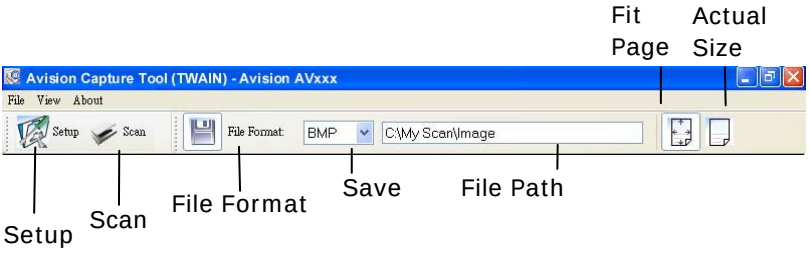
The following procedure describes how to verify your scanner installation. If the installation is not correct, please review the preceding section to check if the cable connection and scanner driver have been successfully installed.

Before you begin, be sure the scanner is on.

1. Select Start>Programs>Avision AVxxx Scanner>Avision Capture Tool.
   The Select Scanner Model dialog box will be displayed.



2. Select your driver type and scanner model and click OK. The following Avision Capture Tool dialog box will be displayed.



3. Choose your desired file format from the File Format drop down list box. (Default is BMP, other choice includes TIFF, GIF, and JPEG.)

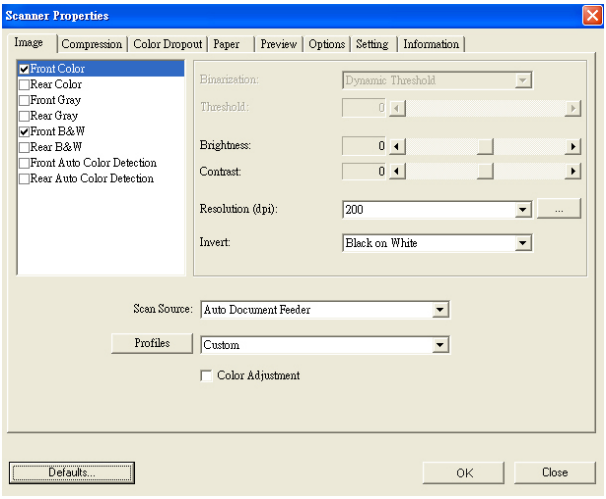
4. Type your desired folder name and file name in the File Path box. (Default is C:\My Scan\Image.)

Note: If you do not wish to save the scanned image, deselect the Save button since default is Save Enable. In this case, the thumbnail view will be disabled. And therefore, after viewing all the scanned images, only the last one will remain on the screen.

5. Click the Setup button (

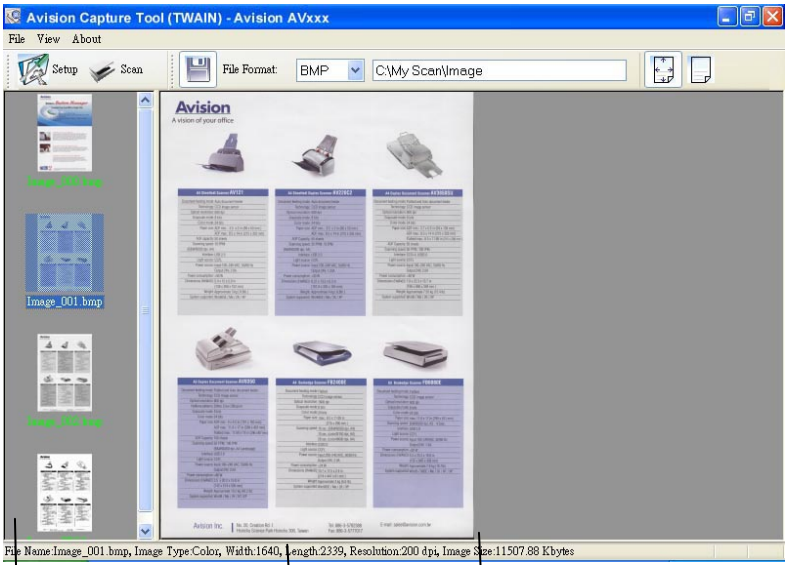
) or choose Setup from the File menu to prompt the Scanner Properties dialog box.

Image Selection Box



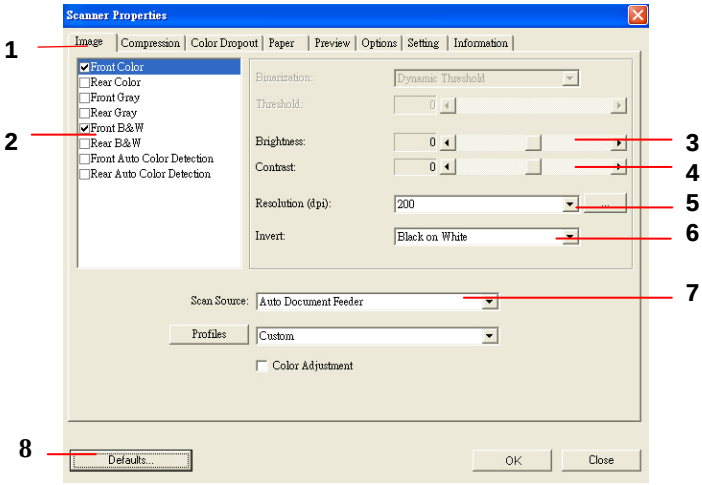
6. From the Image Selection Box, choose your desired image type for your scanned image. (Default is Front B&W) If you have a duplex scanner, choose Front and Rear to scan both sides of your document.
7. Click OK to quit the Scanner Properties dialog box. (To learn more details about the Scanner Properties dialog box, please see the subsequent chapter, *Using the Scanner Properties Dialog Box*.)
8. Place your document face down on the document glass or face up in the auto document feeder.
9. In the Scan Validation dialog box, click the Scan button (

) or choose Scan from the File menu.
10. The document will be scanned and displayed in the Scan Validation screen. After the scanned images have been displayed, your scanner installation verification is completed.



11. You can view the scanned image in Fit Page ( ) or Actual Size (100%) button ( ) from the Viewing toolbars at the right side.
12. Click the Close box or Quit from the File menu to exit the Scan Validation Tool.

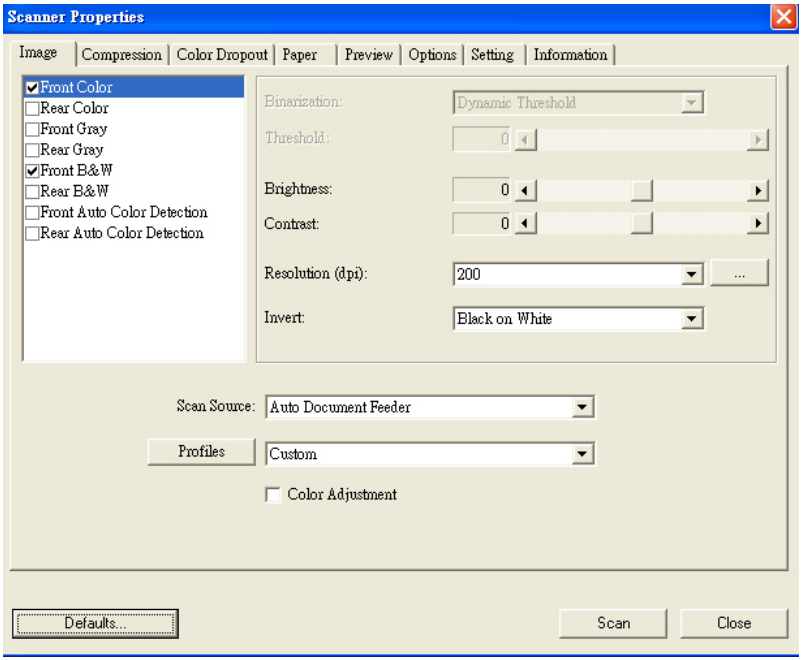
3.1.1 A Glance of the Scanner Properties Dialog Box



1. Tab Options	Choice: Image, Compression, Color Dropout, Paper, Options, Settings, Information.
2. Image Selection Box	Choose your image type and the side of document you wish to scan. Options vary based on type of scanner.
3. Brightness:	Adjust the brightness level from –100 to +100.
4. Contrast	Adjust the contrast level from –100 to +100.
5. Resolution	Determine the quality of the scanned image. The industry standard is 200 dpi.
6. Invert	Reverse the color of your scanned image.
7. Scan Source	**Choice:** Auto Document Feeder, Flatbed, Flatbed (Book), Automatic (varies due to different scanner model)
8. Defaults	Reset all values on the tabs to the factory default settings.

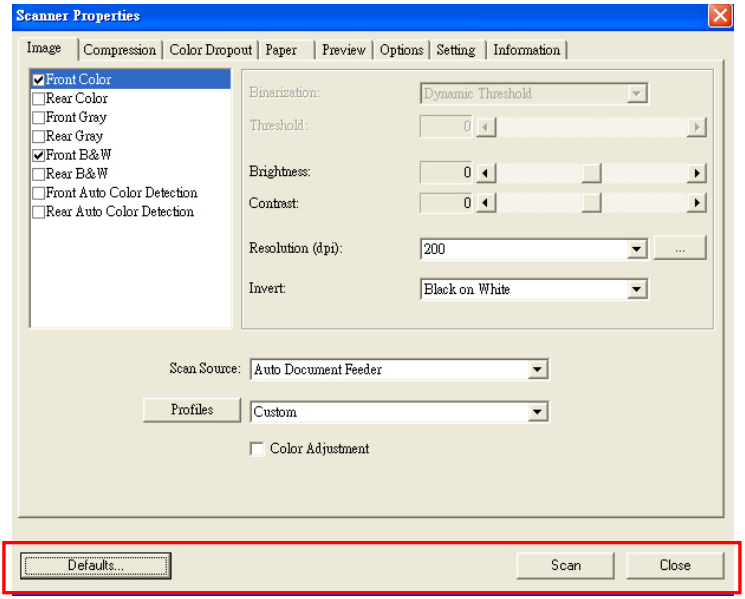
4. Using the Scanner Properties Dialog Box

The Scanner Properties dialog box allows you to configure the scanner's settings. It consists of several tabbed windows each of which will be described in this chapter.



The Scanner Properties dialog box

4.1 Buttons on the Scanner Properties Dialog Box



The buttons on the Scanner Properties dialog box

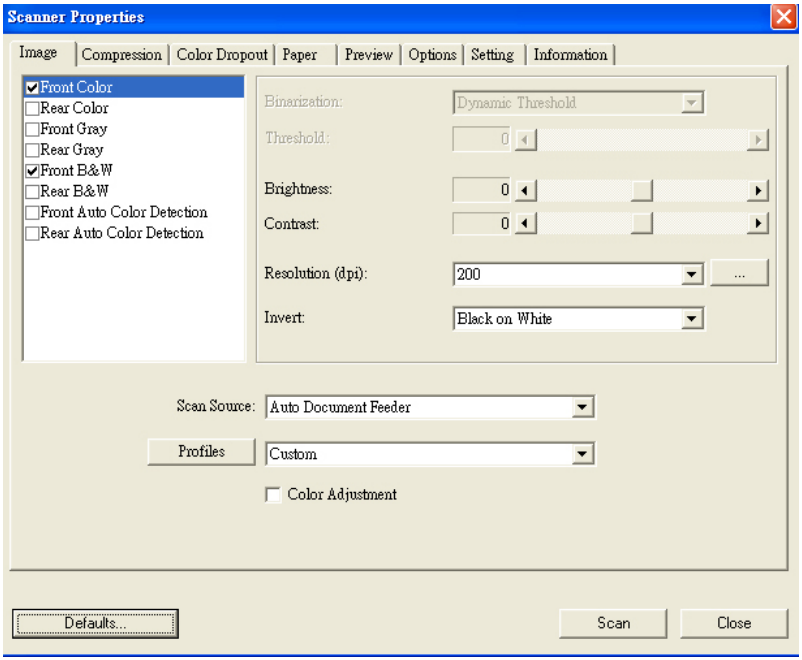
Buttons	Description
Defaults	Click the **Defaults** button, the factory default settings will be shown on each tab.
Scan	After all the scan settings are satisfactory, click the **Scan** button to start scanning your document.
Close	Click the **Close** button to leave the Scanner Properties dialog box.

The following table shows the default settings：

Tab name	Default settings
Image	Image：Front B&W Binarization：Dynamic Threshold Resolution：200 dpi Invert：Blank on White Scan Source：Auto Document Feeder Threshold：None Brightness：None Contrast：None
Compression	None
Color Dropout	None
Paper	Cropping：Automatic Deskew：Yes Orientation：Portrait OverScan：0.00 Multifeed Detection：None Unit：Inch
Options	Rotation Degrees：None Blank Page Removal：None Edge Fill：White，0 mm Image Control Option：None
Setting	Enable Energy Saver：Enable, 15 minutes after last scan action Show Scanning Progress：Yes Show Warning Message：Yes Save Settings after Closing：Yes

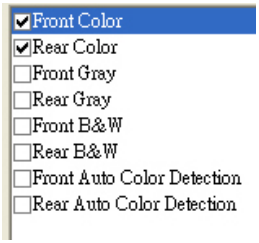
4.2 The Image Tab

The Image tab allows you to choose the front side and (or) the rear side of your document, the type of image, and to set several basic scan settings. Note that except for the resolution, you can set individual scan settings for the front side and the rear side. For example, all settings in the Image tab, Compression tab, Color Dropout tab can be set individually for the front and the rear side. However, the settings in the Paper tab, the Option tab, and the Setting tab have to be set the same for the front and rear side.



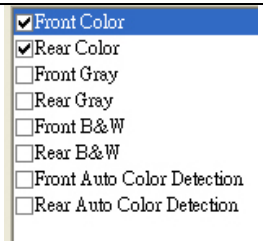
The Image tab dialog box

4.2.1 The Image Selection Box



The **Image Selection** box includes the image type and document side option. If you wish to scan both the front side and the rear side of your color document, you can check both Front Color and Rear Color at the same time. Note the options vary based on type of scanner.

Example 1：Scanning a two-sided color document, both sides in color

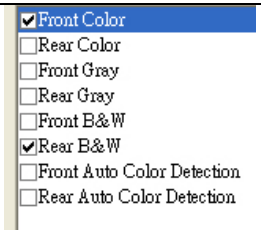


Side / Image Selection

Front

Rear

Example 2：Scanning a two-sided color document, one in B&W(Drop Blue Color：Threshold：10, Background：79), the other in color

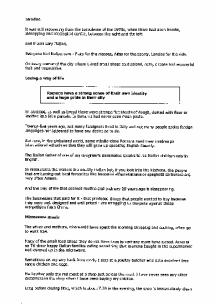


Side / Image Selection

Front

Rear

Image Type	Description
Color	Choose Color if you wish to scan a color image for your original in color.
Gray	Choose Gray image if your original contains actual shades of gray.
B&W	Choose B&W if your original contains only text pencil or ink sketch.



B&W

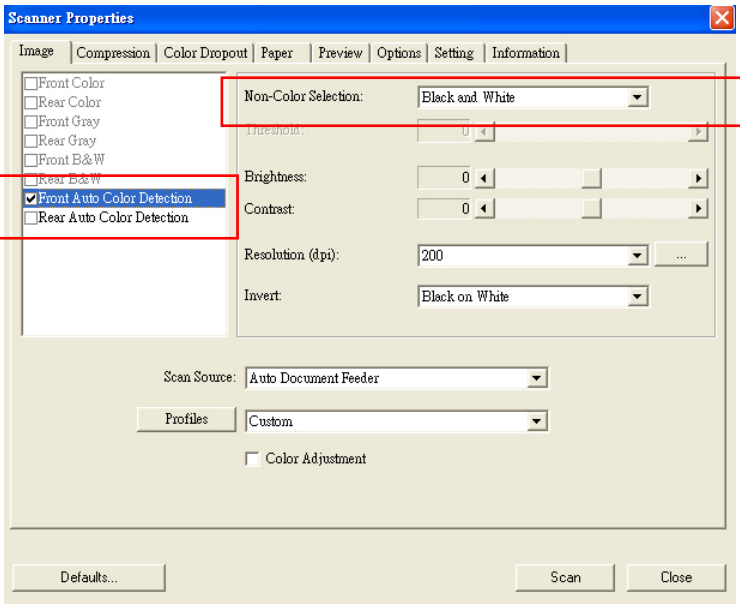
Gray

Color

Front/Rear Auto Color Detection:

Click to automatically detect and scan the front or the rear page of your color document in color image mode. If your document is in colors, the scanner will automatically scan the document into a color image. If your document is non-color, you can choose the output to be either B&W or Gray from the Non-Color Selection option. This option is useful when you have a mixture of color and non-color document.

Note: If you choose Front Rear Auto Color Detection, you can not specify the image mode of your rear page and vice versas.



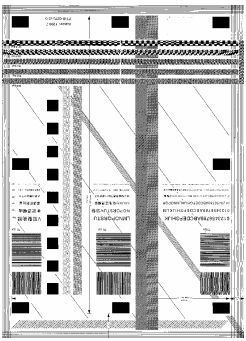
4.2.2 Other Image Options

Binarization This is the process of converting a grayscale or color image to a bi-tonal image. There are several different methods of performing this conversion. Two of the options are **Dynamic Threshold** and **Fixed Processing**.

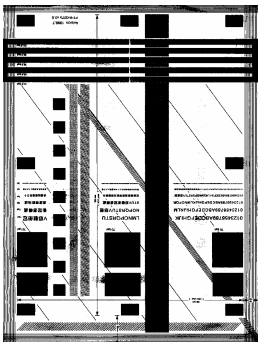
Dynamic Threshold: Selecting **Dynamic Threshold** allows the scanner to dynamically evaluate each document to determine the optimal threshold value to produce the highest quality image. This is used to scan mixed document containing faint text, shaded background, or color background with a single setting. If Dynamic Threshold is selected, Threshold, Brightness, and Contrast are not available.

Fixed Processing: Used for black-and-white and other high contrast documents. A single level is set to determine the black-and-white transition. The threshold is programmable over the entire density range. **Fixed Processing** sets Contrast to 0. If **Fixed Processing** is selected, Contrast is not available.

Threshold Used to convert a grayscale image to a bi-tonal image. The value ranges from 0 to 255. A low threshold value produces a lighter image, and can be used to subdue backgrounds and subtle, unneeded information. A high threshold value produces a darker image, and can be used to help pick up faint images.
Adjust the threshold setting by dragging the Threshold sliding bar to the left or right to achieve the desired threshold setting.



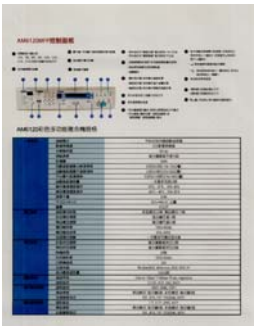
200 dpi, Threshold:80, Brightness: 0



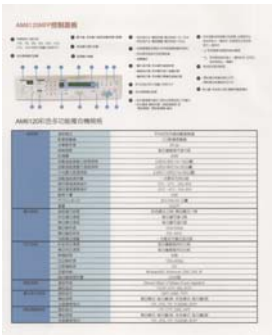
200 dpi, Threshold:170, Brightness: 0

Brightness Adjusts the lightness or darkness of an image. The higher the value, the brighter the image. Drag the slider to the right or left to increase or decrease the brightness. The range is from –100 to +100.

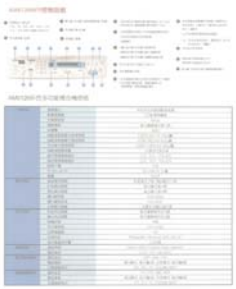
Contrast Adjusts the range between the darkest and the lightest shades in the image. The higher the contrast, the bigger the different grayscale. Drag the slider to the right or left to increase or decrease the contrast. The range is from –100 to +100.



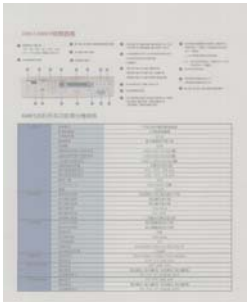
Brightness: -50



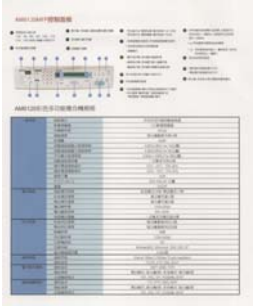
Brightness: 0 (Normal)



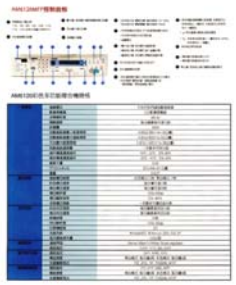
Brightness: +50



Contrast: -50



Contrast: 0 (Normal)



Contrast: +50

Resolution

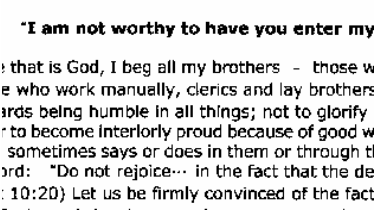
A good control of the resolution results a good detail of an image that scans. The resolution is measured by dots per inch (dpi). Normally, the greater the dpi number, the higher the resolution and the image file size. Be aware that greater resolution takes more time to scan, and more disk space for the scanning image. For your information, an A4 size color image scanned at 300 dpi at True Color mode consumes approximately 25 MB of disk space. A higher resolution (usually means over 600 dpi) is only recommended when you need to scan a small area at True Color mode.

Choose a resolution value from the drop down list. The default value is 200 dpi. Available resolutions are 75, 100, 150, 200,300, 400 and 600. Or you may choose your desired value by clicking the box in the right side of the drop down list and press the arrow key to select your desired value and then click the Add button to include it in the drop down list.

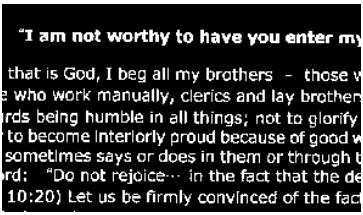
Resolution: 75 dpi

Resolution: 150 dpi

Invert Reverses the brightness and the colors in the image. The default setting is Black on a White background. Reverse mode is White on a Black background. For color images, each pixel will be changed into its complementary color at the command of Invert.


"I am not worthy to have you enter my
that is God, I beg all my brothers - those w
who work manually, clerics and lay brothers
rds being humble in all things; not to glorify
to become interiorly proud because of good w
sometimes says or does in them or through tl
rd: "Do not rejoice··· in the fact that the de
10:20) Let us be firmly convinced of the fact

Black on White


"I am not worthy to have you enter my
that is God, I beg all my brothers - those w
who work manually, clerics and lay brother
rds being humble in all things; not to glorify
to become interiorly proud because of good w
sometimes says or does in them or through t
rd: "Do not rejoice··· in the fact that the de
10:20) Let us be firmly convinced of the fac

White on Black

Scan Source

Choice:

- **Auto Document Feeder:** Used to scan multiple pages.
- **Flatbed:** Used to scan a single page. For example, pages from newspaper clipping, paper with wrinkles or curls.
- **Flatbed (book):** Used to scan several inside pages from book.
- **Automatic:** Allow the scanner automatically set its scan source. If **Automatic** is selected and there is document in both the auto document feeder (ADF) and the flatbed, then the scan source will be automatically set to ADF. If **Automatic** is selected and there is document only in flatbed, then the scan source will be set to flatbed.
- **Merge Two Sides into One Image:** If you have a sheet-fed duplex scanner with front input tray (eg. AV220C2), you can scan an A3 size document with an innovative method. Thus, fold your A3 size document into A4, and then load the paper in the front tray. Choose Merge Two Sides from the Scan Source option and then the scanner is able to scan both sides of your document and merge two A4 images into one A3 image.

  When you select Merge Two Sides into One Image, the Cropping or Multi-feed function will be disabled.

Note the options vary based on type of scanner.

Color Adjustment

Adjusts the color quality of the image so that it comes close to that of the original. This function uses default parameters to adjust the image.

Normal

After Color Adjustment

4.2.3 Scanning color images

The following options are available for scanning color images.

- Brightness
- Contrast
- Resolution
- Invert

4.2.4 Scanning grayscale images

The following options are available for scanning gray images.

- Brightness
- Contrast
- Resolution
- Invert

4.2.5 Scanning B&W images

The following options are available for scanning B&W images.

- Binarization (Dynamic Threshold)
- Resolution
- Invert

Or

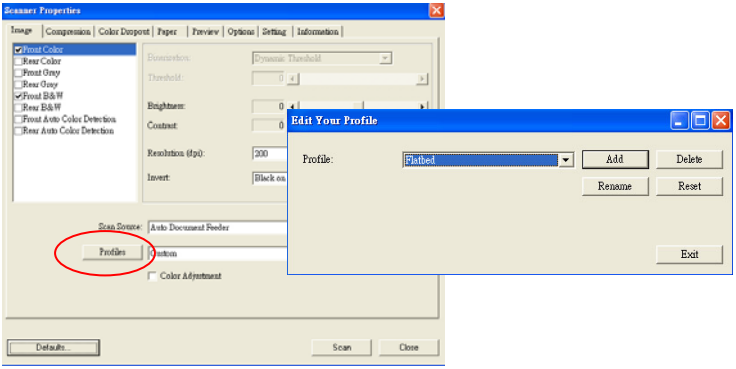
- Binarization (Fix Processing)
- Threshold
- Brightness
- Resolution
- Invert

4.2.6 Editing Profiles

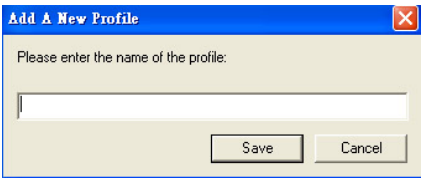
The Scanner Properties dialog box allows you to change and save your frequently used scan settings into a profile. You can edit these profiles by renaming or deleting them.

To add a new profile,

1. Customize your settings. (For example, change your resolution, image type, cropping method, scan size, or other scan settings.)
2. Click the Image tab and then choose “Profiles” to prompt the “Edit Your Profile” dialog box.



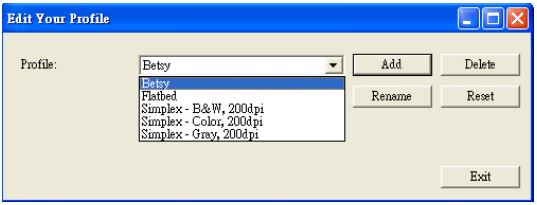
3. Click “Add” to enter the name of the profile and then choose “Save”.



4. The new profile will be saved and shown in the “Profiles” dropdown list box.

To load a profile,

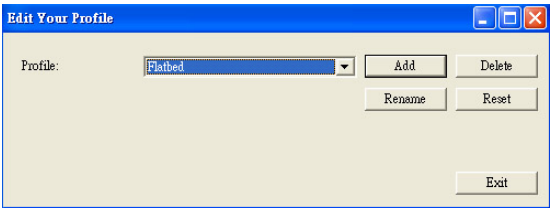
1. From the Image tab dialog box, choose your favorable profile from the “Profiles” dropdown list box.



2. Your favorable profile will be immediately loaded and displayed on Scanner Properties dialog box.

To delete a profile,

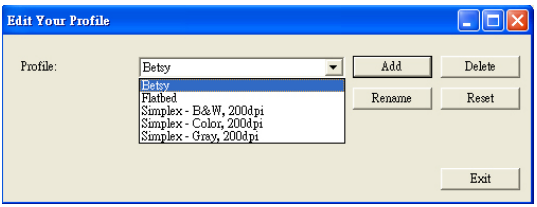
1. From the Image tab dialog box, click “Profiles” to prompt the Edit Your Profile dialog box.



2. Choose the profile you want to delete from the dropdown list box.
3. Click “Delete”. A Confirm message “Are you sure you want to delete this profile?” is prompted.
4. Choose “Yes” to delete or “Cancel” to quit.

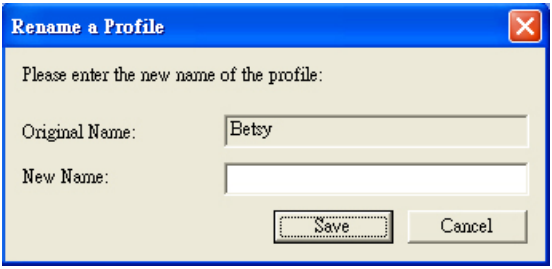
To rename a profile,

1. From the Image tab dialog box, click “Profiles” to prompt the Edit Your Profile dialog box.



2. Choose the profile you want to rename from the dropdown list box and then click the Rename button.

3. Enter new name for the profile.



4. Choose “Save” to save the new profile or “Cancel” to quit.

Note:
The preset default profiles include Flatbed, Simplex-B&W, 200 dpi, Simplex-Gray, 200 dpi, Simplex-Color, 200 dpi, Duplex-B&W, 200 dpi, Duplex-Gray, 200 dpi, Duplex-Color, 200 dpi. If you have a simplex or a sheetfed scanner, the duplex or the flatbed option will not be available.

4.3 The Compression Tab

The Compression tab allows you to compress your scanned image and choose the level of compression. Bi-tonal images are normally compressed using CCITT standard called Group 4 (G4). Color and grayscale images are often compressed using JPEG technology. Move the **JPEG Quality** slider to the right or left to increase or decrease the level of compression. Note the greater the compression level, the lower image quality. Default is 50%.

Note that the compression depends on your image editing application. If your image editing application does not support the type of compression format, then either a warning message will appear or the image quality of the compressed file will not be acceptable.

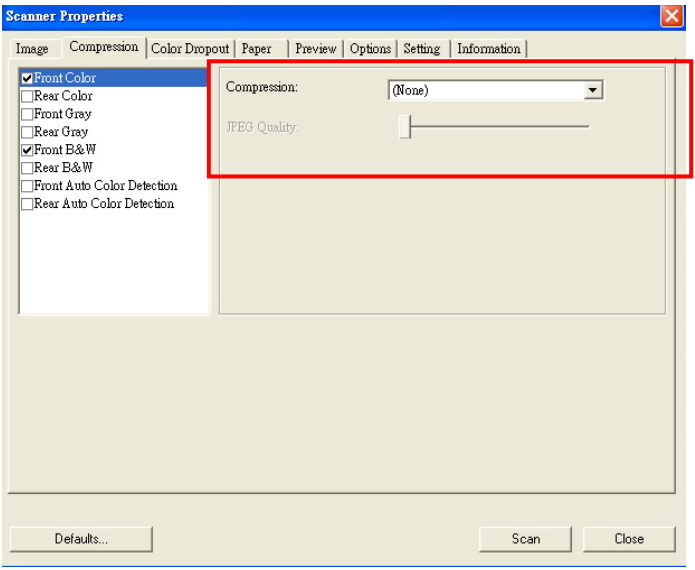
JPEG (Joint Photographic Editor Group). This group developed and lent their name to a file compression standard for color and grayscale images that is widely used by scanners, and software applications. On Microsoft Windows-based systems, a file with the extension .jpg has normally been compressed using this standard.

For scanning color or gray images, the following compressions are available:

- None
- JPEG

For scanning B&W images, the following compressions are available:

- None
- G4



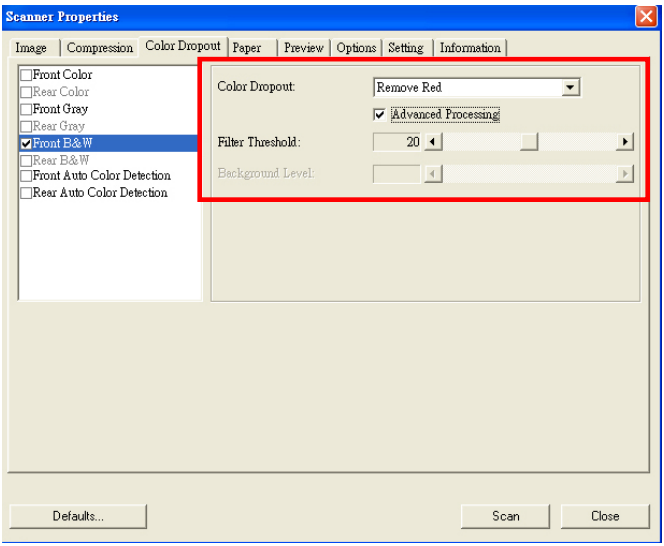
The Compression tab dialog box

4.4 The Color Dropout Tab

4.4.1 Color Dropout Selection

Color Dropout tab allows you to drop either of the red, blue, or green color in your scanned image. If your image contains red color watermark or background, choose the R (Red) channel then any red watermark or background will be removed. This feature is used to sharpen your text when using OCR (Optical Character Recognition) software.

Note that this function supports only black & white and gray images. Therefore, be sure to choose any black & white or gray image type while applying this function.



The Color Dropout dialog box

4.4.2 Other Color Dropout Options

Advanced Processing provides two options that can adjust your scanned image in the best optimal result.

Filter Threshold	This value is used to determine the color which will be dropped out. A lower value will drop more of the selected color out, while a higher value will leave more of the selected color in.
Background Level	The pixel which is higher than the background value will be adjusted to the lightest point. Adjust the value for both the Filter Threshold and Background Level to produce the best optimal result.

Example, slightly adjusting the background value makes your text more clear.

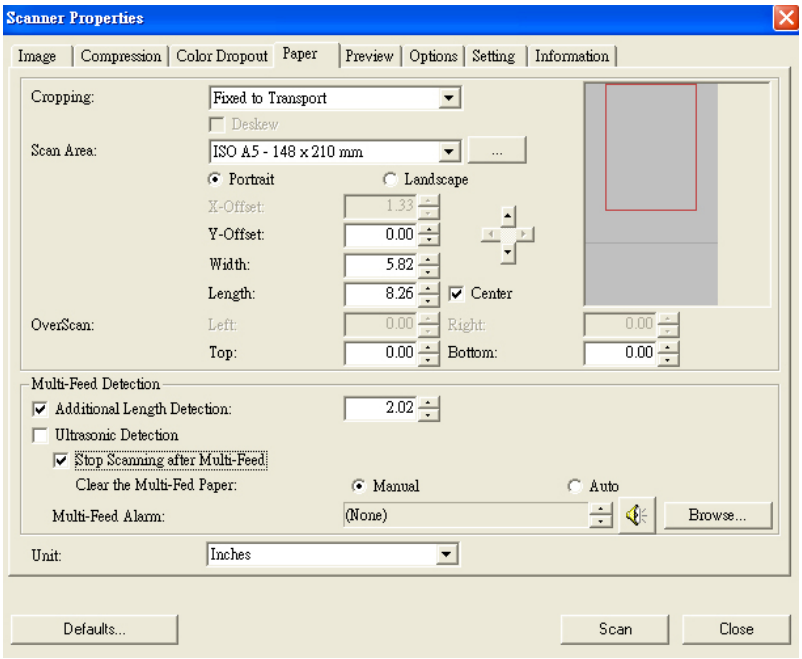
Original

Remove Blue, Threshold: 20, Background: 255

Remove Blue, Threshold: 20, Background Level: 210

4.5 The Paper Tab

The Paper tab allows you to define values relating to image output (i.e., Auto Crop or not, Scan Area, OverScan, Multi-Feed Detection).



The Paper tab dialog box

4.5.1 Cropping

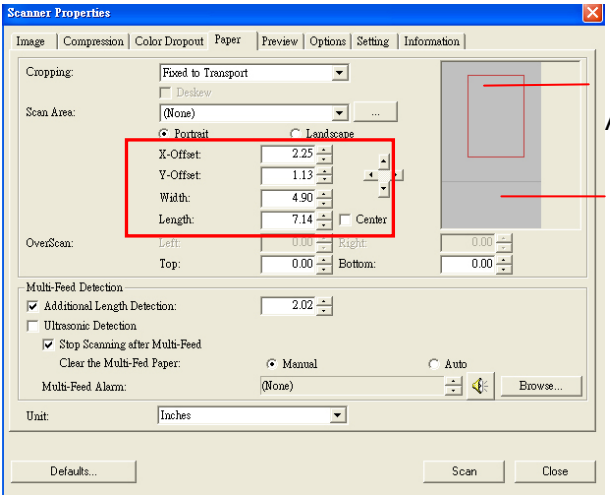
Cropping allows you to capture a portion of the document being scanned. **Choice: Automatic, Fixed to Transport, EOP (End of Page) Detection.**

Options	Description
Automatic	Automatic adjusts the cropping window according to different document sizes. Use this option for batches of mixed-sized documents.
Fixed to Transport	This feature allows you to define the area or zone to be imaged. Use for batches of same-sized documents. If you select this option, you can use the arrow keys to define the x and y offset values, width and length to redefine your scanned area. The Display window will show image placement as you change the values.
EOP (End of Page) Detection	This feature allows you to define the area or zone to be imaged. Use for batches of same-width but different length documents. If you select this option, you can use the arrow keys to define the x and y offset values, width and length to redefine your scanned area. The Display window will show image placement as you change the values.

The following options are only available when **Fixed to Transport** is selected.

- **X-Offset** — the distance from the left end of the scanner to the left edge of the scanning area.
- **Y-Offset** — the position from the top end of the document to the top end of the scanning area.
- **Width** — the width of the scanning area.
- **Length** — the length of the scanning area.
- **Center:** automatically calculates the x-offset for center-fed feeding based upon document size selected.
- — relocate the scan area by click the arrow key on the cross sign while retain the scan size. View the result from the Display window.

Example： Redefine your scan area (x-offset: 2.25 inches ; y-offset:1.13 inches)



Original

After Fixed to Transport

The Redefined Scan Area

4.5.2 Other Paper Selection

Deskew

Use this option to automatically deskew a document.

Note: If the skew angle is too great, some of the image may be cut off.

Scan Area

Choose your desired paper size with the drop-down list box. Or you may select a custom paper size by clicking the **Scan Area** box and then click **Add** to include in the choice.

Choice: None, US Letter- 8.5”x 11”, US Legal – 8.5” x 14”, ISO A4 – 21 x 29.7 cm, ISO A5 – 14.8 x 21 cm, ISO A6 – 10.5 x 14.8cm, ISO A7 – 7.4 x 10/5 cm, ISO B5 – 17.6 x 25 cm, ISO B6 – 12.5 x 17.6 cm, ISO B7 – 8.8 x 12.5 cm, JIS B5 – 18.2 x 25.7 cm, JIS B6 – 12.8 x 18.2 cm, JIS B7 – 9.1 x 12.8 cm, Scanner Maximum, Long Page.

Long Page:
When you need to scan documents whose length exceeds scanner maximum, please choose Long Page. Note if Long Page is selected, the Multi-Feed Detection will not be available. Options: Unknown Length, Enter Length (Note: This option varies due to type of scanner.)

Choose “Unknown Length” if you have a batch of long page document with unknown length. Choose “Enter Length” to enter the length and width of your documents or your desired scan size on documents. This is useful when you have a batch of documents with the same scan size or a batch of same-sized documents.

OverScan

Overscan allows you to add a specific margin at top and bottom or right and left (Options vary based on the type of scanner) of the edge of the image. This is used to reduce possible corner clipping on the skewed images and often applied to a batch of skewed document to be scanned in the auto document feeder. Select a value between 0 and +5 mm. Note the overscan result will not be shown in the Display window and that the availability of the function varies based on type of scanner.

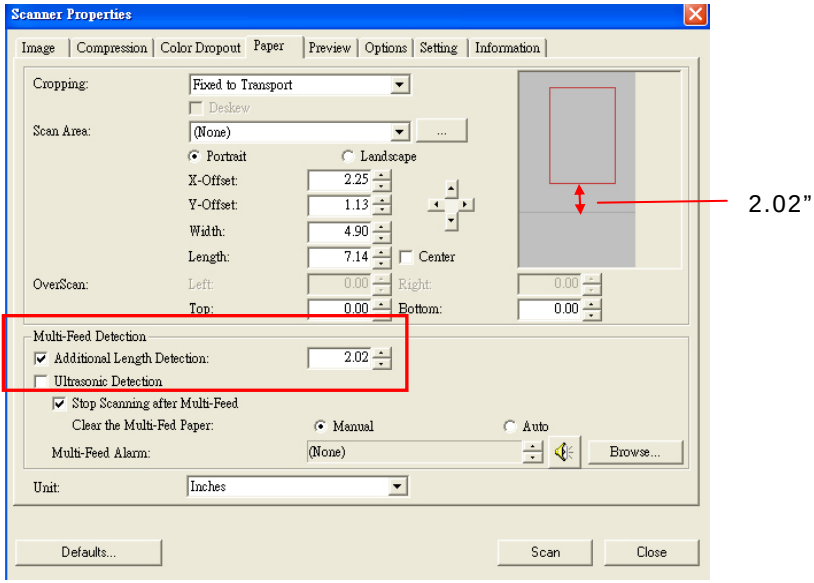
Multi-Feed Detection

Multi-Feed Detection allows you to detect overlapped document that go through the auto document feeder. Multi-Feed usually occurs due to stapled documents, adhesives on documents, or electro-statically charged document. Note： The availability of the function varies based on type of scanner.

Additional Length Detection

Additional Length Detection allows you to define the length of document being multi-fed. This value indicates the additional length exceeding your scan area. The Display window will show the size of the document as you change the value. A value of 0 indicates no additional length detection. The Additional Length Detection is best used when scanning same-size documents in the auto document feeder.

Example：Additional Length Detection：Set Additional Length to be 2.02 inches



Ultrasonic Detection

Ultrasonic Detection allows you to set overlapped document by detecting paper thickness between documents. Note： The availability of the function varies based on type of scanner.

There are two options available if Multi-Feed is detected.

- **Stop Scanning after Multi-Feed**

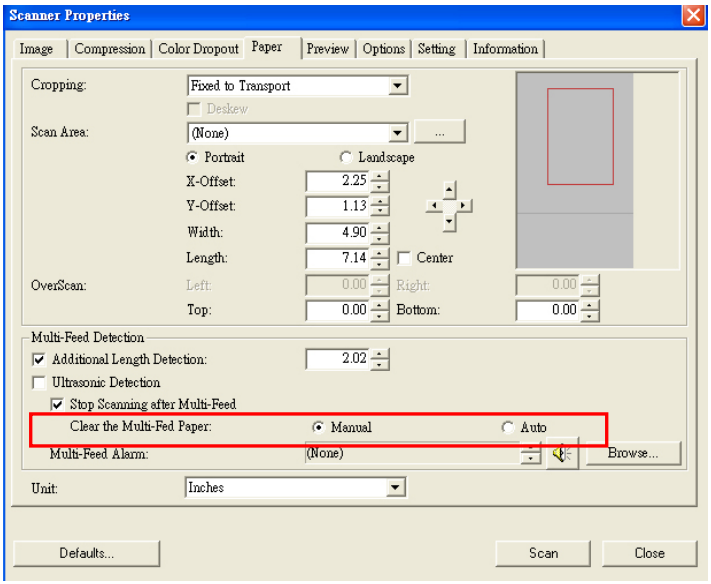
  If this is selected, the scanner will stop the feeder and display the following Warning dialog box if multi-feed is detected.

Action:

1. Follow the instruction on the Warning dialog box to remove the rest pages on the feeder.
2. Click OK to close the Warning dialog box.
3. Scan the rest pages.

i. **Clear the Multi-Fed Paper:**
Choice: Manual, Auto

If Auto is selected, once multi-feed is detected and scanning operation is stopped, the scanner will automatically clear the transport of the multi-fed paper. If manual is selected, once multi-feed is detected and scanning operation is stopped, you need to manually clear the transport of the multi-fed paper.
Note: The availability of this option varies based on type of scanner.



- **Multi-Feed Alarm**

  If a wave file is added, the scanner will make a sound alarm if multi-feed is detected yet no Warning dialog box will be displayed.

  If “Stop Scanning after Multi-Feed” is selected, the scanner will stop the feeder.

  If “Stop Scanning after Multi-Feed” has not been selected, the scanner will continue to scan till the end of your document.

  Action:

  1. If “Stop Scanning after Multi-Feed” is selected, follow the action described in the preceding section “Stop Scanning after Multi-Feed” on the previous page to complete your job.
  2. If “Stop Scanning after Multi-Feed” has not been selected, rescan the pages where multi-feed is detected.

How to add the sound alarm：

1. Click the Browse button on the right side of the speaker icon. The Open dialog box appears.
2. Choose your wave file.
3. Click the Open button. The wave file is added.

Units

Defines the primary measurement system. **Inches, Millimeters,** and **Pixels** are available.

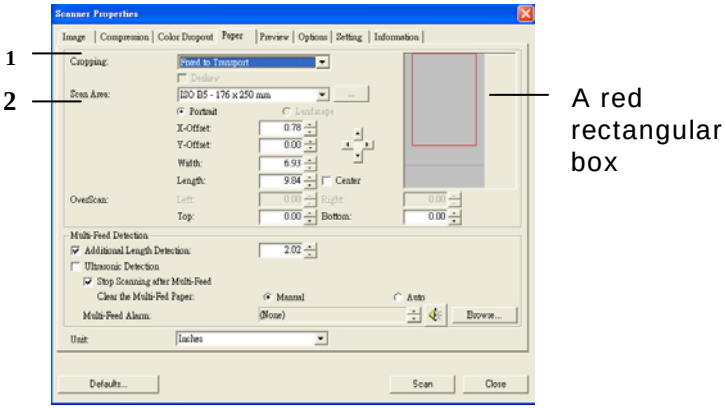
4.5.3 Relative to Document

Relative to Document: (used for batches of same-sized documents)

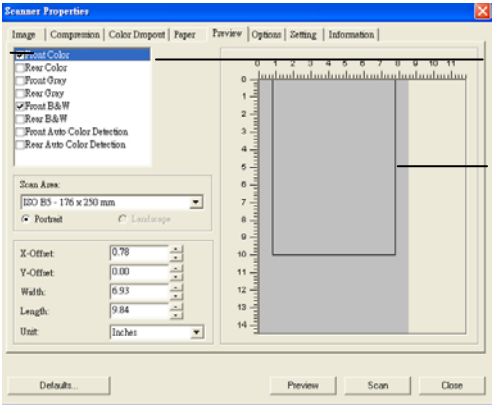
This option allows you to crop different areas on your documents and deliver these images in B&W, Gray, or Color separately. For example, there are applications which require you to store the entire document in B&W and a part of the document in color to save storage space. This is useful for documents where a photograph, or signature appears in a consistent area on the document such as resumes, and so on.

The following procedure describes how to reproduce the entire document in B&W and a portion of document (picture) in color.

1. On the Paper tab, choose “Relative to Document” or “Fixed to Transport” from the Cropping option.
2. Choose your scan size from the Scan Area option. The selected scan size will be displayed in a red rectangular box. This is also the scan size of your entire document. (For example, ISO B5. If you have not chosen a scan area and leave the selection as None, then the default area will be the scanner’s maximum.)



3. Click the Preview tab to display the Preview window. A black rectangular box appears to indicate the max. scan size your have just selected.

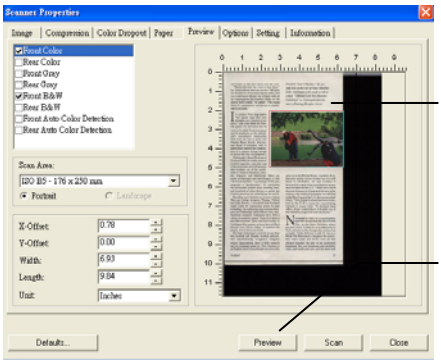


The Image Selection Box

The selected image

A black rectangular box

4. Click the Preview button to view the entire image in low resolution to correctly crop your relative scan area.



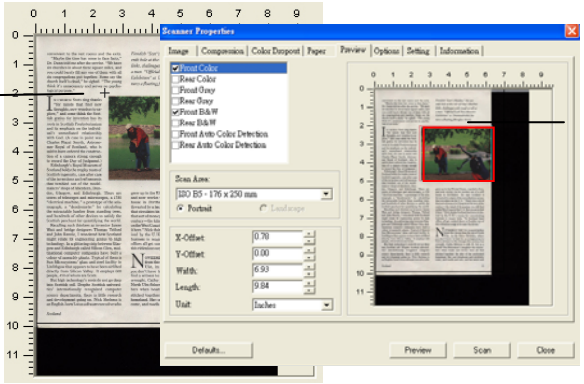
The Preview Image

The Preview Button

5. Select image type from the Image Selection box. The selected image will appear in highlighted color. (For example, Front Color)

6. Place your cursor on the Preview window and click your left mouse button. A cross sign will appear as illustrated. Create your relative scan size diagonally by dragging the left mouse button to your preferable size. The selected area will appear in a red box as illustrated.

A Cross Sign



The Relative Area

7. Check the B&W image from the Image Selection box to scan the entire document.
8. Click the Scan button to start scanning the document in two image types and sizes. (See the result in below.)

convenient to the rest rooms and the exits.

"Maybe the time has come to face facts," Dr. Dunn told me after the service. "We have six churches in about three square miles, and you could barely fill any one of them with all six congregations put together. Some say the church itself is dead," he sighed. "The young think it's unnecessary and serves no psychological purpose."

Fiendish "Scot's Maiden," she seventh hole at the isle of Islay's Machrie links, challenges with rough as tall as a man. "Official Loch Ness Monster Exhibition" at Drumnadrochit features a floating fiberglass Nessie.

IN CHURCH Scots sing thanks "for minds that find new thoughts, new wonders to explore," and some think the Scottish genius for invention has its roots in Scottish Presbyterianism and its emphasis on the individual's unmediated relationship with God. (A case in point was Charles Piazzi Smyth, Astronomer Royal of Scotland, who is said to have ordered the construction of a camera strong enough to record the Day of Judgment.)

Edinburgh's Royal Museum of Scotland holds the trophy room of Scottish ingenuity, case after case of the inventions and refinements that tumbled out of the model-makers' shops of Aberdeen, Dundee, Glasgow, and Edinburgh. There are scores of telescopes and microscopes, a 1780 "electrical machine," a prototype of the seismograph, a "dendrometer" for calculating the extractable lumber from standing trees, and hundreds of other devices to satisfy the Scottish penchant for quantifying the world.

Recalling such thinkers as inventor James Watt and bridge designers Thomas Telford and John Rennie, I wondered how Scotland might relate its engineering genius to high technology. In a glittering strip between Glasgow and Edinburgh called Silicon Glen, multinational computer companies have built a colony of assembly plants. Typical of them is Sun Microsystems' glass-and-steel facility in Linlithgow that appears to have been airlifted directly from Silicon Valley. It employs 600 people, 450 of whom are Scots.

But high technology's roots do not go deep into Scottish soil. Despite Scottish universities' internationally recognized computer science departments, there is little research and development going on. Nick Shelness is an English-born Lotus software executive who grew up in the United States, married a Scot, and now works via his modem out of a mill house in Perthshire. He says Scotland is threatened by a lack of the serendipitous money that circulates in the U.S. "There was a lot of that sort of money in Glasgow at the turn of the century—the kind of dynamism you still find on the West Coast of the U.S. But you never feel it here." Nick thinks Scotland has been victimized by the U.K.'s mania for concentrating business in major cities. "In Scotland head offices all get sucked down to London out of this ridiculous urge to be near the throne."

NOWHERE IN THE U.K. is much farther from the throne than the isle of North Uist, in the Outer Hebrides, where you don't have to look for an octogenarian to find a witness to the changes this century has wrought. Cathy Johnson is only 35, but as a North Uist fisherman's daughter she remembers when boats and ferries were all that stitched together the isles of her perforated homeland. She saw telephones and electricity come, and roads and cars, and hot water and

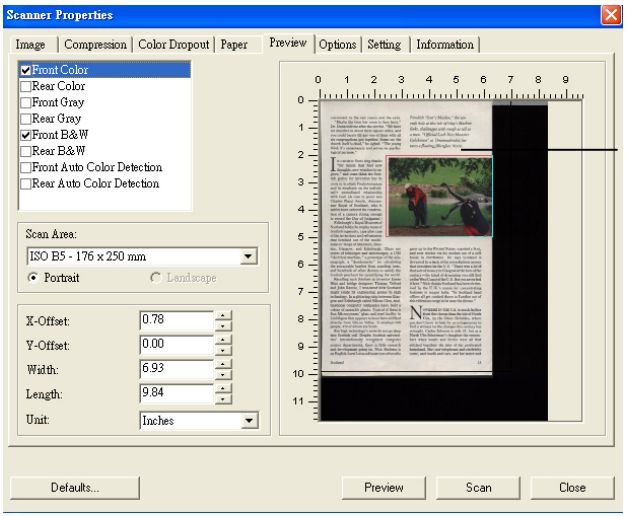
The entire document in B&W

The relative area in color

4.6 The Preview Tab

The Preview tab allows you to preview (a low-resolution scan) your image before final scan. This preview image lets you allocate your scan area. You can choose your scan area by the "Scan Area" drop down list box or placing your cursor on the Display window and dragging it diagonally on the Display window. Then, a red rectangle box will appear to indicate the selected area.

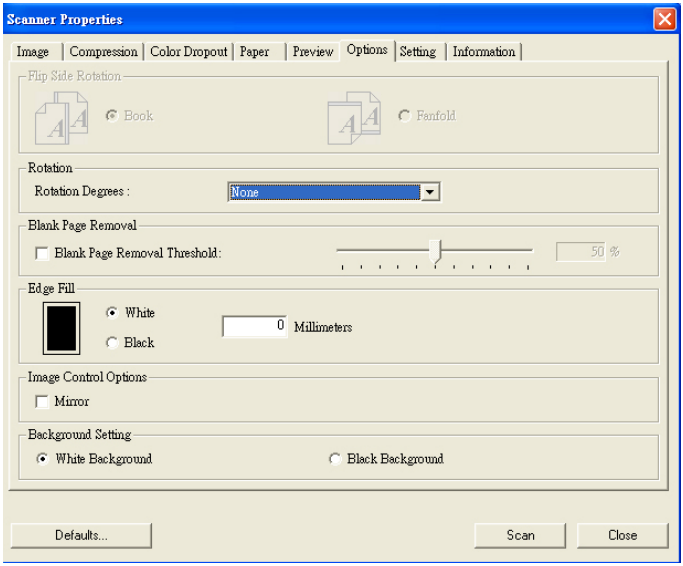
Note: If you choose "Automatic Cropping" on the "Paper Tab", then to select a scan area on the Preview tab is not allowed.



The Preview Tab

4.7 The Options Tab

The Options tab allows you to set following additional image processing settings.



The Option tab dialog box

Flip Side Rotation

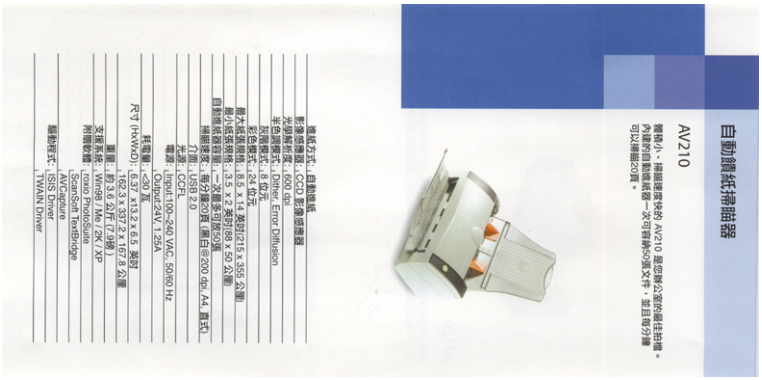
Select “fanfold” to rotate the image of the reverse side to 180 degrees.

This is applied to double-sided document which are viewed in portrait are sometime fed into the scanner in landscape or vice versa.

Choice: Book, Fanfold.

If “Book” is selected, the image of the reverse side will not be rotated.

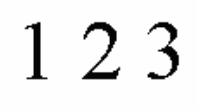
The following illustration shows the documents which should be viewed in portrait are fed into the scanner in landscape



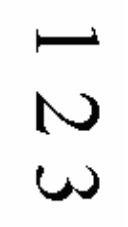
Rotate Image

Choose the rotation angle from the drop down list if you wish to rotate your scanned image.

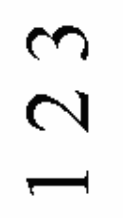
Choice: None, 90°CW(clockwise), 90°CCW(counter clockwise), 180°.



Original



Rotate 90°CW



Rotate 90°CCW

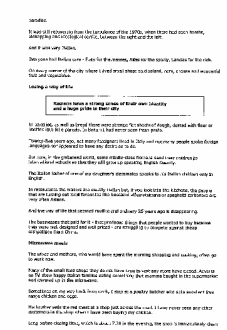
Rotate 180°

Blank Page Removal

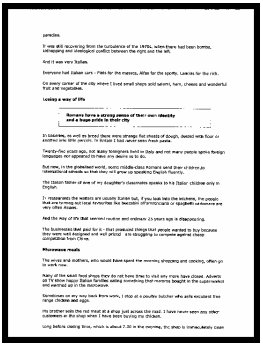
Check if you wish to remove the blank page and move the slider to the left or right to your desired threshold.

Edge Fill

Check White or Black if you wish to add white or black edge on the border of your scanned image. Enter the value from 0 to 5 mm. Default value is 0.



Original



Edge Fill: 5mm (Black)

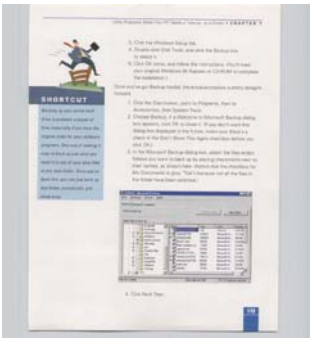
Image Control Option

Check the Mirror box if you wish to reverse the right and left side of your image.

Original

The Mirror Effect

Background Setting	This option allows you to set your scan background. **Choice: White Background, Black Background.**

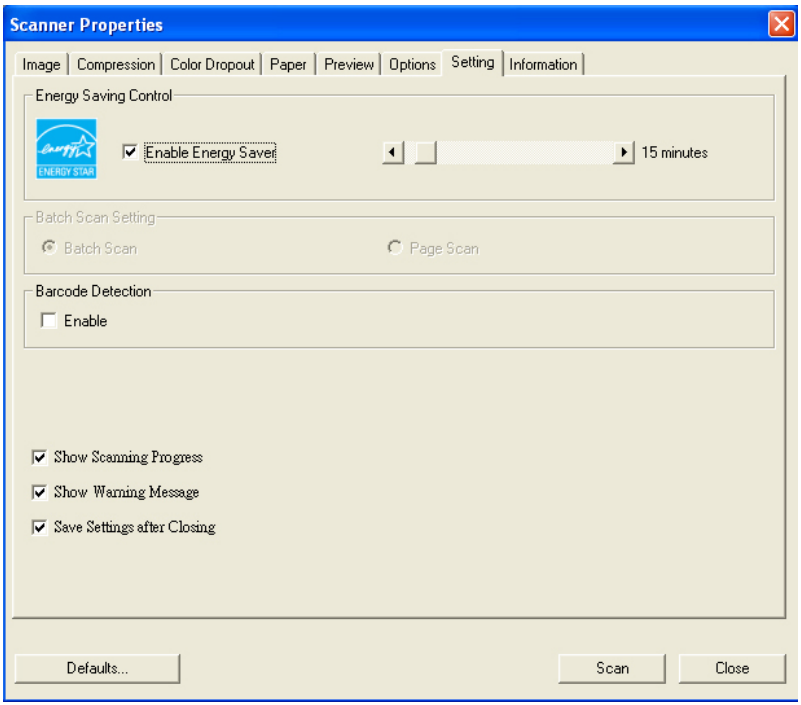


White Background

Black Background

4.8 The Setting Tab

The Setting tab allows you to set the following settings:



The Setting tab dialog box

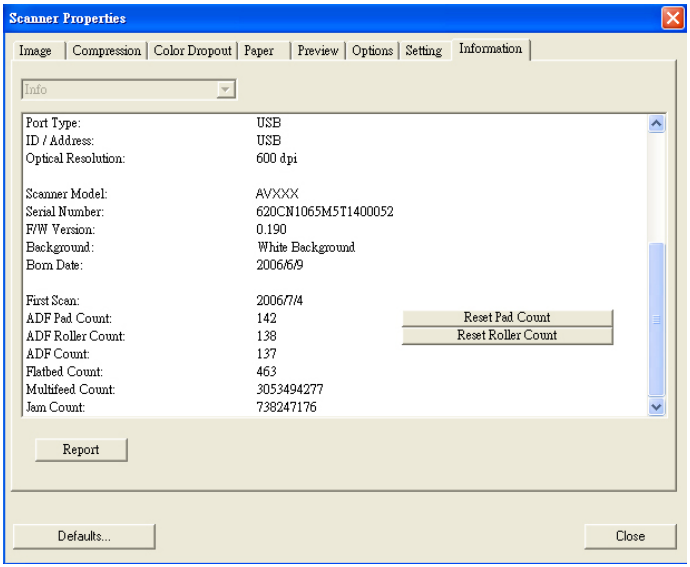
Energy Saving Control	Check the **Enable Energy Saver** box and move the slider to the right to set the amount of time to start the energy saver after your last action. The range is from 1 to 240 minutes. The default is 15 minutes.

Batch Scan Setting	**•Batch Scan** To increase the scanning speed, the scanner first scans a few pages of your document and then sends these scanning data to the application. Therefore, during scanning, the numbers of pages been scanned on the scanner is somehow different with the numbers of pages displayed on your computer screen. Choose this mode if you wish to complete your scanning task at the fastest speed. **•Page Scan** If you choose Page Scan, during scanning, the scanner will first scan only one page of your document and then send the scanned data to the application and then scan the next page and send the next data to the application, and so on. Therefore, in this mode, the scanning speed is slower yet this helps to keep the same scanning progress between the scanner and your computer screen.
Barcode Detection	Check this option to enable detecting and recognizing barcode in your document. After the detecting process, an avbarcode.ini file will be generated and stored in your system drive, for example, Windows\avbarcode.ini. Note: The availability of this feature varies based on type of scanner.

Show Scanning Progress	Check and the scanning progress bar will be shown during scanning.
Show Warning Message	Check to show the warning messages such as “ADF pad count exceeds 50,000 scans (the number varies based on type of scanner). Please replace the ADF pad and reset the pad count.”
Save Settings after Closing	Check to save your scanner properties settings after leaving the dialog box. Next time when you open the Scanner Properties dialog box, the previously saved settings will be shown.

4.9 The Information Tab

The Information tab displays the following system and scanner information.



The Information tab dialog box

The "Report" button :

If you encounter any error message while using the scanner, click the Report button. A report.txt file (C:\AVxxx) will be generated. Please send this file to the nearest service center for trouble shooting.

The "Reset Pad Count" button」：

After scanning approximately 50,000 pages (the number varies based on type of scanner) through the Auto Document Feeder (ADF), the ADF pad may be worn out and you may experience problems with document feeding. In this case, it is highly recommended to replace the ADF pad with a new one. (Please refer to the manual for proper replacing procedure.) For ordering the ADF pad, please consult your nearest dealer. After replacing the ADF pad, click the "**Reset Pad Count**" button to reset the pad count.

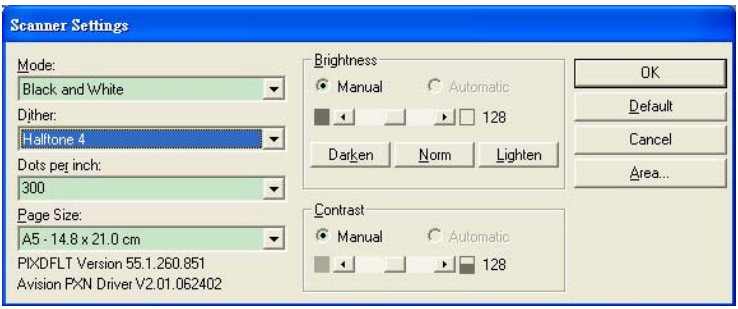
The "Reset Roller Count" button」：

After scanning approximately 200,000 pages (the number varies based on type of scanner) through the ADF, the ADF roller may be worn out and you may experience problems with document feeding. In this case, it is highly recommended to replace the ADF roller with a new one. (Note the replacement of the ADF roller has to be performed only by authorized service center. Therefore, please return your scanner for roller replacement.) After replacing the ADF roller, click the "**Reset Roller Count**" button to reset the roller count.

Note：
The lifetime and the replacing procedure vary based on type of scanner. Please consult your nearest dealer for more details.

5. ISIS Interface Operation

The ISIS driver operation method is similar to the TWAIN's. Every function on the ISIS interface screen is briefly described as below:



Mode: Select one of scan modes, including B&W, gray, color options.

Dither: 5 halftone levels available, can be disabled.

Dots per inch: Select your desired resolution.

Paper Size: Select your desired paper size.

Brightness: Adjust your scan image brightness or darkness.

Contrast: Adjust the range between the darkest and the lightest shades in the image.

Default: Click to reset all settings.

Area: Select your desired scan area or position.

6. Using The Button

The convenient buttons on the scanner is shown as below:

6.1 Installing Button Manager

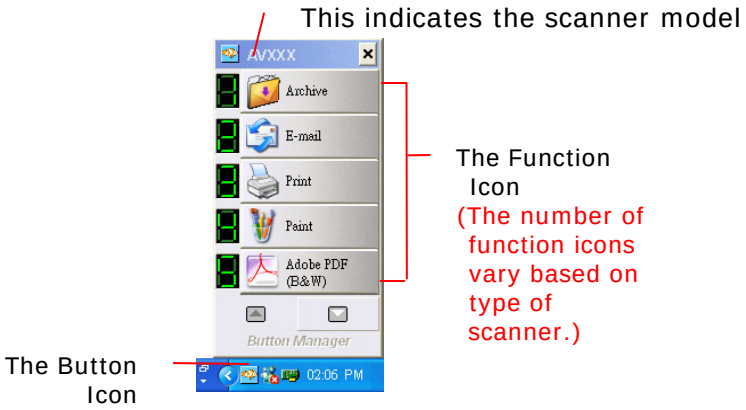
To use the buttons on the scanner, you need to install the Button Manager. To ensure the Button Manager work properly, please FIRST install Button Manager before installing the scanner driver.

Installing the Button Manager is easy. Insert the supplied CD to your CD-ROM drive and follow the instructions on the screen to complete the installation of the Button Manager.

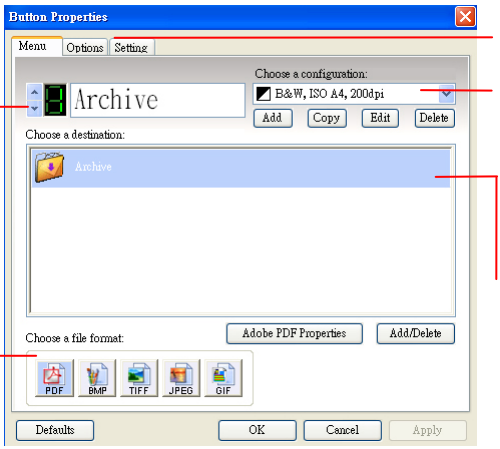
Button Manager provides you an easy way to scan your document and then link the scanned image to your designated software application. All this can be done by a simple touch of the button on the scanner. Yet, before you scan, it is recommended to check the button configurations first to ensure a proper file format and a destination application.

6.2 Checking the Button Configurations Before Scanning

1. Click the Scan button on the scanner.
2. The Button Panel is displayed in the Windows System Tray at the bottom right corner of your computer screen.



3. The Button Panel shows the first five scanning buttons. Right-click the button (function) you wish to check. The Button Properties window appears.



Click to select options or setting.

The button number and name.

The scan settings for the selected button. (in this case button #1).

The file format of the scanned image. (*The options vary based on type of scanner.)

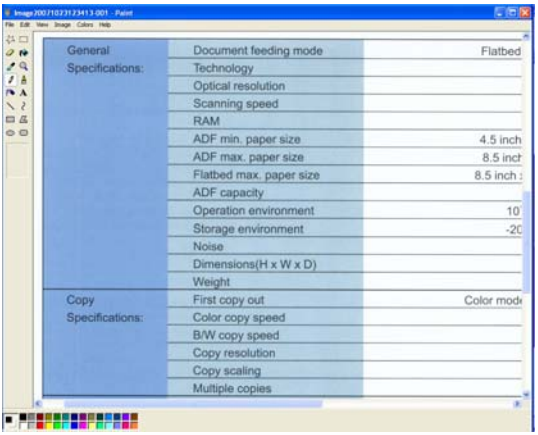
The destination application. (This is the application that opens after you have finished scanning.)

The default setting is indicated in highlighted color. If you wish to change the setting, use this window to reset the setting for the file format, destination application, or other scan settings. See “Configuring the Button” in the subsequent section to reset the settings.

4. Click the OK button to leave the window.

6.3 Scanning From One Touch of the Buttons

1. Adjust the paper guide for the width of paper and load the document with their tops into the automatic document feeder.
2. Check the number on the LED screen to ensure if you are selecting the proper scan settings and destination application. (For example, if you want to scan with button #4, which open Microsoft Paint and display the scanned image in the main window of Microsoft Paint, the LED screen should show 4).
3. Press the Scan button on scanner.
4. After the scanning is finished, the Microsoft Paint software will be launched and the scanned image appears in the main window of Microsoft Paint as below.



Note:
For details information on how to use the Button Manager, please refer to the user's manual in the supplied CD.

7. Care and Maintenance

7.1 Cleaning the ADF

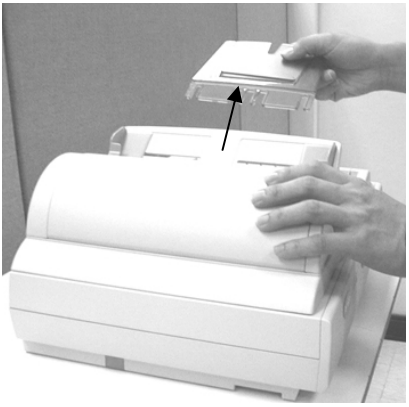
Your scanner is designed to be maintenance-free. However, it still needs to be cleaned occasionally to ensure optimum image quality and performance.

The scanner parts may be contaminated with ink, toner particles or paper coatings. As a result, the scanner needs to be cleaned occasionally particularly in the following cases:

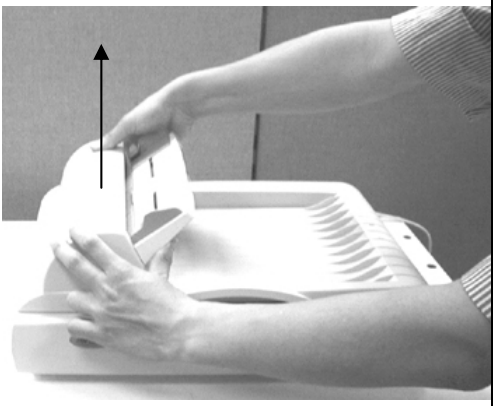
1. Documents do not feed smoothly or easily;
2. Several documents feed at one time.

The cleaning procedures

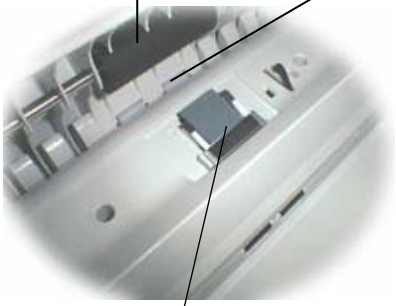
1. Wet a cotton swab with some isopropyl alcohol. (95%)
2. Open the ADF unit as shown below and wipe the upper feeding roller by moving the swab from side to side. Rotate the roller forward with your finger and repeat the above cleaning procedures until the entire roller is cleaned. Be careful not to snag or damage the pick springs.
3. Wipe the pad in the direction from top to bottom. Be careful not to hook the pick springs.
4. Close the ADF unit. Your scanner is now ready for use.



Move the paper guide extension in this direction.



Move the paper guide in this direction.



7.2 Cleaning the Glass

The procedures

1) Soak a cotton swab with some isopropyl alcohol. (95%)
2) Open the ADF unit and document cover as shown below. Wipe the glass of flatbed and ADF area by moving the swab from side to side.
3) Close the ADF unit and document cover. Your scanner is now ready for use.

7.3 Replacing the ADF detachable pad module

After scanning approximately 20,000 pages through the ADF, the pad spring may be worn out and you may experience problems with document feeding. In this case, it is highly recommended to replace the pad module with a new one. For ordering the pad module, please consult your nearest dealer and follow the procedure in below to replace it.

Removing Procedure

1. Open the ADF front cover.

2. Remove the ADF detachable pad module by pulling out the upper part of the pad clamp as shown in the figure below.

Move the ADF front cover in this direction.

Press both arms of the ADF pad.

Remove the ADF pad in this direction.

8. Troubleshooting

If you have problems with the operation of your scanner, please check the following troubleshooting hints.

8.1 Frequently asked Questions

Question: Paper becomes jammed during scanning.
Answer: 1) Open the ADF unit.
2) Pull out the jammed paper carefully.
3) Close the ADF unit.

Question: More than one sheet of paper were fed into the scanner.
Answer: 1) Open ADF unit.
2) Remove the multi-fed sheets of paper.
3) Close the ADF unit.
4) Flatten the corners and edges; loosen the Paper before reloading it in the paper guide.
5) Check the feeding roller condition and do the cleaning if necessary.

Question: Paper becomes skewed in the scanner.
Answer: 1) Check the feeding roller condition; do the cleaning if necessary.
2) Use the paper guide when feeding the paper.

Question: When I power on the scanner, it makes noises and will not stand ready.

Answer: There are two possibilities:

1) You forgot to remove the shipping lock from the scanner. Please remove the shipping lock first.
2) You did not place the scanner on a flat desktop surface. This may cause the scanner to function improperly.

Question: While scanning, the scanner often makes noises or it scans back and forth.

Answer: Please choose lower speed from the TWAIN user interface for low speed PC.

Question: The scanned image always comes out to be too dark.

Answer: 1) Use your application to modify the Gamma setting to 2.2 and 1.8 for your printer and monitor respectively.
2) Adjust Brightness setting from the TWAIN interface to get a brighter image.

Question: The scanner works well except for the line art, the lines of which seem much thicker than the original.

Answer: Increase the Brightness or adjust the Threshold setting to adjust the line art image.

8.2 Technical Service

Before contact Avision, please prepare the following information:

- Scanner serial & revision number (located on the bottom of the scanner);
- Hardware configuration (e.g., your host CPU type, RAM size, free disk space, display card, interface card);
- The name and version of your scanning software application;
- The version of your scanner driver.

Please call us at:

Headquarter

Avision Inc.
No. 20, Creation Road I, Science-Based Industrial Park,
Hsinchu 300, Taiwan, ROC
TEL: +886 (3) 578-2388
FAX: +886 (3) 577-7017
E-MAIL: service@avision.com.tw
Web Site: http://www.avision.com.tw

US and Canada Area

Avision Labs, Inc.
6815 Mowry Ave., Newark CA 94560, USA
TEL: +1 (510) 739-2369
FAX: +1 (510) 739-6060
E-MAIL: support@avision-labs.com
Web Site: http://www.avision.com

9. Specifications

All specifications are subject to change without notice.

Model Name	DF-0510
Scanner Type	ADF/Flatbed Desktop scanner
Scanning Mode	42-bit color 256 shades of gray scale Line Art Error Diffusion
Optical Resolution	600 dpi
Light Source	Cold cathode fluorescent lamp
ADF Scanning Speed	20 PPM
Scanning Document Size	ADF mode 8.5"x 14" Flatbed mode 8.5"x 11.69"
Interface	USB 2.0
Power Requirements	24Vdc,1.25A
Power Consumption	< 24W
Operation Temperature	5 °C to 35 °C
Storage Temperature	-40 °C to 60 °C
Dimension	275 mm x 445 mm x 332 mm (WxDxH)
Weight	5.4 kgs